AD-A238 637 (

REPORT D	OCUMENTATION PAGE	, colon for wess well come sive will 1921 (197)
maintaining the data needed, and completing and reviewle suggestions for reducing this burden, to Washington Head	is estimated to average 1 hour per response, including the time fing the collection of information. Send comments regarding this bur quarters Services, Directorate for information Operations and Report Reduction Project (0704-0188), Washington, DC 20503.	or reviewing instructions, searching existing uses 200000000000000000000000000000000000
. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	June 1991	Professional paper
TITLE AND SUBTITLE		5. FUNDING NUMBERS
LESSONS LEARNED DURING A COASTAL SAGE SCRUB RESTORATION		PR: ME82
PROJECT		PE:
AUTHOR(S)		WU: DN 300197
M. F. Platter-Rieger		
PERFORMING ORGANIZATION NAME(S) AND ADDRE	SSIES	8. PERFORMING ORGANIZATION
University of California San Diego Scripps Institute of Oceangraphy La Jolla, CA 92037	JUL 0 2 1991	REPORT NUMBER
SPONSORING/MONITORING AGENCY NAME(S) AND	ADDRESS(ES)	10. SPONSORING/MONITORING AGENCY REPORT NUMBER
Naval Ocean Systems Center San Diego, CA 92152-5000		AGENOT HE ON NOMBER
Approved for public release; distril	12b. DISTRIBUTION CODE	
3. ABSTRACT (Maximum 200 words)		
high sand content and erode easily nity began. Hoeing broke the soil ciculatum, Lotus scoparius, Salve plants were also placed in two loc was cut back to about 8 hrs per was created, the unassisted slope had (0.071/m²), L. scoparius (0.017/m nica had increased to: 11.5/m², Lappear until spring 1991. Seeding ber of plants was low, and probat	ly. In July 1990, erosion control by restoral crust; an irrigation system was built; and ia mellifera, and Plantago insularis were sations. The site was watered all day, 3 – 5 yeek. Overhead irrigation proved successfudeveloped a native plant community of A. (a), and S. mellifera (0.002/m²). Three more scoparius to 0.5/m², and S. mellifera to 2 g late during summer and irrigating successoly is due to: 1) inadequate soil preparation	hand seeded by 21 July. One gal. container days/wk, for the first 5 weeks; then watering l; drip created rills. In the 10 years since being californica (0.008/m²), E. fasciculatum on the after seeding, the frequency of A. californica water seeding.

14. SUBJECT TERMS 15. NUMBER OF PAGES marine chemistry 16. PRICE CODE benthic flux 19. SECURITY CLASSIFICATION OF ABSTRACT 18. SECURITY CLASSIFICATION OF THIS PAGE 20 LIMITATION OF ABSTRACT **UNCLASSIFIED** UNCLASSIFIED UNCLASSIFIED SAME AS REPORT

Published in Proceedings of the third annual SER Conference, May 1991.

	44 345	sion P)
	9770 Unaaa	GRAMI TAB O'Mived ficatio	X
		** - ****	
	Distribution/		
	Aveilability Codes		
(A STATE)	1-A	Avail Spee	•
	•		

LESSONS LEARNED DURING A COASTAL SAGE SCRUB RESTORATION PROJECT. Mary F. Platter-Rieger. Code 522, Naval Ocean Systems Center, San Diego, CA 92152-5000, PH (619)553-2777.

A 2,023 m² steep slope was cut in 1980 at Submarine Base San Diego, CA, to create a parking lot. The soils have a high sand content and erode easily. In July 1990, erosion control by restoration of the native coastal sage scrub community began. Hoeing broke the soil crust; an irrigation system was built; and Artemisia californica, Eriogonum fasciculatum, Lotus scoparius, Salvia mellifera, and Plantago insularis were hand seeded by 21 July. One gal. container plants were also placed in two locations. The site was watered all day, 3 - 5 days/wk, for the first 5 weeks; then watering was cut back to about 8 hrs per week. Overhead irrigation proved successful; drip created rills. In the 10 years since being created, the unassisted slope had developed a native plant community of A. californica (0.008/m²), E. fasciculatum (0.071/m²), L. scoparius (0.017/m²), and S. mellifera (0.002/m²). Three months after seeding, the frequency of A. californica had increased to: $11.5/m^2$, L. scoparius to $0.5/m^2$, and S. mellifera to $2.7/m^2$. E. fasciculatum is not expected to appear until spring 1991. Seeding late during summer and irrigating successfully germinated plants. However, the number of plants was low, and probably is due to: 1) inadequate soil preparation; 2) sterile subsoil, 3) little nearby native vegetation for propagules; 3) no weed control, with irrigation weeds crowded out new seedlings in better soil; and 4) sand-clay slope flow.

91-03898